IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Norman COHEN et al.

Serial No: 10/087,647

Filed: March 1, 2002

For: CONTINUAL REBINDING OF
DATA SOURCES

Examiner: Syed J. ALI

Art Unit: 2195

APPEAL BRIEF

Board of Patent Appeals and Interferences
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The applicant submits this brief pursuant to 37 C.F.R.
§41.37(a)(1) in furtherance of the Notice of Appeal filed July 11,
2006.

Please charge Deposit Account 50-0510 the $500 fee for
filing this Appeal Brief. No other fee is believed due with this
Appeal Brief, however, should another fee be required please
charge Deposit Account 50-0510.

Real Party In Interest

The real party in interest is International Business
Machines Corporation, as evidenced by the assignment set forth at
Reel 012779, Frame 0312.

Related Appeals And Interferences

The Appellants' legal representative does not know of any
other appeal, interference or judicial proceeding which will

affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-25 are currently pending in the present application, with claims 1, 6, 9, 18 and 21 being independent claims. Claims 1-25 stand finally rejected. Claims 1-25 are being appealed.

Status of Amendments

No amendments to the claims were made after the Final Office Action dated April 11, 2006 ("FOA").

Summary of the Claimed Subject Matter

The present invention relates to rebinding a binding expression to an appropriate data source in accordance with a particular data specification. Application, pp. 1, ln. 3-6. Generally, data sources are capable of providing data used to perform one or more tasks or computations. Application, pp. 7, ln. 28-30 and Fig. 1. A binding expression is configured to contain data from data sources. Application, pp. 6, ln. 13-19. Thus, when a binding expression is bound to a given data source, all requests for the current value of the binding expression are satisfied by obtaining a value from that data source, and each new value generated by the data source is reported as a new value generated by the binding expression. Application, pp. 6, ln. 21-26.

A data specification describes the data required by the binding expression. Application, pp. 6, ln. 31-32. If the data specification changes, the binding expression is rebound to another data source satisfying the new data specification. Application, pp. 6, ln. 32 - pp. 7, ln. 8. Rebinding to a new network resource when there is a change in the data specification is referred to as specification-driven rebinding. Application,

pp. 8, ln. 6-9, Figs. 2A, 2B and 3. Alternatively, if a data
source can no longer provide the data required by the data
specification, the binding expression is also rebound.
Application, pp. 8, ln. 6-13. This type of rebinding is referred
to as advertisement-driven rebinding. Application, pp. 8, ln. 6-
9, Figs. 4A, 4B and 5.

Turning to the claims, the subject matter of independent
claim 1 is a system for rebinding a binding expression to a new
network resource. Application, pp. 5, ln. 15-17 and Fig. 1, items
120, 106 and 108. The system includes a data specification
describing a resource required at the binding expression.
Application, pp. 6, ln. 31-32 and Fig. 1, item 122. A data
resolution service is configured to discover network resources
that satisfy the data specification. Application, pp. 7, ln. 9-15
and Fig. 1, item 126. The system further includes means for
rebinding the binding expression to the new network resource when
the data specification changes. Application, pp. 8, ln. 3-6.

An example of means for rebinding the binding to the new
network resource when the data specification changes is
specification-driven rebinding. Application, pp. 8, ln. 13-16.
In one embodiment, specification-driven rebinding begins by
evaluating the data specification. Application, pp. 8, ln. 31,
Fig. 2A, item 202. At a comparing operation, the new value of the
data specification is compared to the previous value, if any, of
the data specification. Application, pp. 9, ln. 8-10, Fig. 2A,
item 204. If the data specification yields a new value, or if the
data specification has not been evaluated previously, a canceling
operation a subscription for update notifications of the current
data source, if such a subscription exists, is canceled.
Application, pp. 9, ln. 12-17, Fig. 2A, item 206. The binding
module submits the new data specification value to the data
resolution service at a submitting operation. Application, pp. 9,
ln. 23-30, Fig. 2A, item 208. Checking operations examine the
response returned by the data resolution service to determine if
there is at least one data source listed. Application, pp. 9, ln.

31 - pp. 10, ln. 7, Fig. 2A, items 210, 212. If the response is a list containing at least one data source, the binding module chooses one of the data sources found on the data source list. Application, pp. 10, ln. 8-15, Fig. 2A, item 214. Another checking operation determines if an error occurred during invoking operation. Application, pp. 10, ln. 16-22, Fig. 2A, item 216. If no error is reported in the checking operation, the binding module invokes the port manager by sending an indication of the data source selected to be the bound data source. Application, pp. 10, ln. 23-29, Fig. 2B, item 218. The response from the port manager is analyzed to determine if an error indication, rather than an access port, was sent. Application, pp. 10, ln. 30-32, Fig. 2B, item 220. If the response was a valid access port, the binding module invokes the data resolution service by subscribing to notifications of new advertisements from the newly selected data source. Application, pp. 11, ln. 4-10, Fig. 2B, item 224. Finally, the binding module binds the binding expression to the port obtained in the invoking operation. Application, pp. 11, ln. 11-12, Fig. 2B, item 226.

Another embodiment of specification-driven rebinding begins when an evaluation of the data specification yields a new value, or when the data specification has not been previously evaluated. Application, pp. 12, ln. 8-10. If data sources offering the type of data called for in the data specification exist on the network, the data resolution service 126 responds by providing a list 310 of one or more potential appropriate data sources. Application, pp. 12, ln. 16-19, Fig. 3, items 126 and 310. An indication of the selected data source descriptor from the list is returned by the binding module 118. Application, pp. 12, ln. 27-28, Fig. 3, items 314 and 312. The binding expression then rebinds to the appropriate data source using an access port. Application, pp. 12, ln. 32 - pp. 13, ln. 1, Fig. 3, item 318. In addition, a subscription is sent to the data resolution service to provide update notifications of new advertisements from the selected

appropriate data source to the binding module. Application, pp.
13, ln. 1-4, Fig. 3, item 320.

The subject matter of independent claim 6 is a system for
rebinding a binding expression to a new network resource.
Application, pp. 5, ln. 15-17 and Fig. 1, items 120, 106 and 108.
The system includes a data specification describing a resource
required at the binding expression. Application, pp. 6, ln. 31-32
and Fig. 1, item 122. A data resolution service is configured to
discover network resources that satisfy the data specification.
Application, pp. 7, ln. 9-15 and Fig. 1, item 126. The system
further includes means for rebinding the binding expression to the
new network resource when the resource descriptor changes.
Application, pp. 8, ln. 3-6.

An example of means for rebinding the binding to the new
network resource when the resource descriptor changes is
advertisement-driven rebinding. Application, pp. 8, ln. 6-9. In
one embodiment, advertisement-driven rebinding begins when a data
resolution service receives advertisement from the current data
source that a change in a data-source property has occurred.
Application, pp. 13, ln. 29 - pp. 14, ln. 3, Fig. 4A, item 402.
An invoking operation invokes the binding module with an update
notification. Application, pp. 14, ln. 7-15, Fig. 4A, item 404.
If the change in property of the current data source requires the
binding expression be rebound to another data source the current
value of the data specification is submitted to the data
resolution service. Application, pp. 14, ln. 17-29, Fig. 4A,
items 406 and 408. During an invoking operation the binding
module chooses one of the data sources found on the data source
list. Application, pp. 15, ln. 10-13, Fig. 4A, item 414. Another
operation sends a port manager an indication of which data source
in the data source list is selected to be the bound data source.
The port manager, in response, provides an access port to the
selected data source, based on the data source indication.
Application, pp. 15, ln. 22-26, Fig. 4B, item 418. At a
subscribing operation, the binding module invokes the data

resolution service by subscribing to notifications of property changes to the newly selected appropriate data source. Application, pp. 16, ln. 3-11, Fig. 4B, item 424. Finally, at a binding operation, the binding module binds the binding expression to the access port for the data source selected from the data source list. Application, pp. 16, ln. 13-16, Fig. 4B, item 426.

Another embodiment of advertisement-driven rebinding begins when a new advertisement from the currently bound data source is received by the data resolution service. Application, pp. 16, ln. 23-27, Fig. 5, item 506. The data resolution service, in accordance with a subscription for data source notifications, responds by sending an update notification to the advertisement-driven rebinding process. Application, pp. 16, ln. 7-30, Fig. 5, item 504. If rebinding is required, the binding module submits the current data specification to the data resolution service. Application, pp. 17, ln. 1-5, Fig. 5, item 514. The data resolution service, in turn, responds with a list of one or more potential appropriate data sources. Application, pp. 17, ln. 5-10, Fig. 5, item 516. The rebinding process transmits a selected data source descriptor to the port manager. Application, pp. 17, ln. 14-15, Fig. 5, item 522. In response, the port manager returns an access port to the appropriate data source based on the transmitted data-source descriptor. Application, pp. 17, ln. 14-15, Fig. 5, item 524. At this point, if the access port to the appropriate data source is different from the currently bound data source, the data resolution service is invoked to cancel any subscription for notifications of new advertisements by the currently bound data source, and to subscribe to notifications of new advertisements by the newly selected appropriate data source. Application, pp. 17, ln. 19-24, Fig. 5, item 526. Finally, the binding module rebinds the binding expression to the appropriate data source via the access port. Application, pp. 17, ln. 25-26.

The subject matter of independent claim 9 is a method for rebinding a binding expression to an appropriate network resource in a network. Application, pp. 5, ln. 15-17 and Fig. 1, items

120, 106 and 108. The method includes a data specification describing a resource required at the binding expression. Application, pp. 6, ln. 31-32 and Fig. 1, item 122. The network includes a current network resource, and the network resources include at least one resource property. Application, pp. 5, ln. 28-30 and Fig. 1, items 110 and 106. The method includes obtaining a list indicating potential appropriate network resources. Application, pp. 9, ln. 24-27 and Fig. 2A, item 208. A selecting operation selects an appropriate network resource from the list. Application, pp. 10, ln. 8-14 and Fig. 2A, item 214. A rebinding operation rebinds the binding expression to the appropriate network resource. Application, pp. 11, ln. 11-12 and Fig. 2B, item 226.

The subject matter of independent claim 18 is a system for rebinding a binding expression to an appropriate network resource in a network. Application, pp. 5, ln. 15-17 and Fig. 1, items 120, 106 and 108. The binding expression is associated with a data specification describing the data required at the binding expression. Application, pp. 6, ln. 31-32 and Fig. 1, item 122. The network includes a current network resource, and the network resources includes at least one resource property. Application, pp. 5, ln. 28-30 and Fig. 1, items 110 and 106. The system includes a data resolution service configured to provide a list indicating potential appropriate network resources. Application, pp. 7, ln. 9-13 and Fig. 1, items 126. A port manager is configured to provide an access port to the appropriate network resource such that the binding expression rebinds to the appropriate network resource via the access port. Application, pp. 7, ln. 25-26 and Fig. 1, items 128.

The subject matter of independent claim 21 is a computer program product for rebinding a binding expression to an appropriate network resource in a network. Application, pp. 5, ln. 15-17 and Fig. 1, items 120, 106 and 108. The computer program product includes a first computer readable program code configured to cause the program to provide a list indicating

potential appropriate network resources. Application, pp. 9, ln. 24-27 and Fig. 2A, item 208. A second computer readable program code is configured to cause the program to select an appropriate network resource from the list. Application, pp. 10, ln. 8-14 and Fig. 2A, item 214. A third computer readable program code is configured to cause the program to rebind the binding expression to the appropriate network resource. Application, pp. 11, ln. 11-12 and Fig. 2B, item 226.

Grounds for Rejection to be Reviewed on Appeal

I. Claims 1-25 are rejected under 35 U.S.C. §102(e) as anticipated by U.S. Patent Application Publication No. US2002/0087665 applied by Marshall et al. (hereinafter "Marshall")

Argument

I. CLAIMS 1-25 ARE NOT ANTICIPATED BY MARSHALL

Claims 1-25 were rejected under 35 USC §102(e) as anticipated by Marshall. FOA, pp. 2. To anticipate a claim under 35 USC §102, a reference must teach every element of the claim. MPEP 2131.

The Marshall Reference

Despite a small overlap in terminology, the Marshall is fundamentally unrelated to the pending application. Marshall is concerned with managing names of resources, and dependencies among resources, as well as with storing resources within the system and ensuring, before a resource is deployed, that all the resources on which it depends are deployed. Marshall, para. 19-21. In contrast, the present application is concerned with ensuring that rebinding expressions remain bound to data sources whose properties meet the current requirements, even if the properties or the requirements change several times a minute. Application, pp. 1, ln. 3-6.

Marshall has a primitive notion of "resolving" a resource ID by one-time substitution of alias resource IDs. Marshall, para. 57. By contrast, the notion of resolving a data specification in the present application involves searching for suitable data sources, selecting one of them according to an application-specific algorithm (in the binding module), and continually tracking both the data specification and the properties of the data source so that the binding expression containing the data specification remains bound to a suitable data source even as the data specification and the properties of data sources fluctuate.

Most importantly, the response by Marshall to a resource ceasing to exist, as illustrated in Fig. 3, is confined to providing "out of service" notifications according to resource dependencies. Marshall, para. 58. The response of the present application to a data source becoming unsuitable is to automatically repair the damage by finding and rebinding to another data source. Application, pp. 15, ln. 10-14.

With these key differences in mind, the Appellants now address the claim rejections.

Claim 1

Claim 1 recites, in part, "A system for rebinding a binding expression to a new network resource, wherein a data specification describes a resource required by the binding expression." In rejecting claim 1, the Examiner argues that Marshall teaches a system for rebinding a binding expression to a new network resource, wherein a data specification describes a resource required by the binding expression. OA, pp. 3. The Appellants respectfully disagree with the Examiner's interpretation of Marshall.

Marshall appears to relate to a method and system for enabling resources to be defined, tracked, verified, resolved and managed statically and dynamically wherein resource management is performed explicitly and consistently throughout the system regardless of resource type. Marshall, para. 1. Marshall briefly

mentions dynamic binding of resources using resource ID, version
ID and other identifiers independent of their physical location in
the context of preventing clashes and inconsistencies between
resources. Marshall, para. 20-22. Importantly, however, Marshall
does not mention or suggest rebinding a binding expression to a
new network resource, wherein a data specification describes a
resource required by the binding expression.

In support of the Examiner's position, the Office Action
offers paragraphs 18 and 40 of Marshall as evidence of teaching
rebinding a binding expression to a new network resource, wherein
a data specification describes a resource required by the binding
expression. Turning to the specific paragraphs cited in the
Office Action, paragraph 18 of Marshall states:

> Another embodiment of the invention involves enabling
> software to connect to requested (or required) resources
> regardless of location by resolving an abstract resource ID,
> type ID, and version ID. Other identifiers may also be used.
> When several interchangeable instances of a particular
> resource are available, the number of instances, and the
> algorithm for selecting among them when they are requested
> may be transparent to the requesting entity. The type of
> algorithm may vary by resource type, without the necessary
> knowledge of either the requesting entity of the requested
> resource. When appropriate, the algorithm for selecting
> among the instances may take into account the management
> state (e.g., availability, business, etc.) of the different
> instances. For example, this may be used to transparently
> provide load balancing, fault-tolerant redundancy, etc.
> Marshall, para. 18.

As discussed above, this paragraph lacks teaching or
suggestion of a binding expression, much less rebinding the
binding expression to a new network resource. Paragraph 40 of
Marshall states:

> Another embodiment of the present invention relates to
> resource identification. Each resource may have some type of
> identifier which may be used to uniquely distinguish it from
> other resources. For example, a method of scoping may be
> applied to resource identification so that a resource
> identifier may be considered unique within its scope. In
> effect, the scope of the resource becomes part of the
> resource's identifier. This may be accomplished through
> naming techniques. For example, a variety of scopes may be

created to support different capabilities. Conflicts may be
prevented among identifiers associated with different
customers (or other entities or factors) by defining a
separate scope for their resource identifiers. For example,
a customer's company (or other entity or identifier) may
appear as a prefix (or other supplement) to their resource
identifiers. Other variations may be implemented. Marshall,
para. 40.

Again, the Appellants find no teaching or suggestion in the
above paragraph of rebinding the binding expression to a new
network resource.

In response, the Examiner argues, "When the resource goes
out of service or the specification changes, methods are provide
[in Marshall] for managing changes of the resource state to ensure
that the requesting entity remains bound to a resource that can
satisfy the needs of the requesting entity (paragraphs 0058, 0061,
0100)." FOA, pp.8. The Appellants respectfully disagree with the
Examiner's reading of Marshall.

Paragraph 58 of Marshall contains no teaching or suggestion
of rebinding the binding expression to a new network resource. In
this paragraph, Marshall mentions that if a resource becomes out
of service, the system notifies resource dependencies that the
resource is "out of service". Paragraph 61 of Marshall merely
states that a resource manager may be applied to service. There
is no mention or suggestion of rebinding the binding expression to
a new network resource in either cited paragraph.

The Examiner also refers to paragraph 100 of Marshall. The
paragraph states, in part, "The present invention facilitates the
removal of old functionality where deprecated resources may be
gradually removed from the system." In the next paragraph more
detail of removing depreciated resource is provided. Marshall
states, "At step 714, new entities which may need the type of
functionality provided by "X" and "Y" may be defined to use "Y"."
Marshall, para. 100 (emphasis added). Thus, Marshall describes
creating new entities bound to new resources, not rebinding the

- 11 -

binding expression to a new network resource. Marshall, Fig. 7, item 714.

Furthermore, the resource identification described in Marshall is vastly different from the recited data specification of claim 1. While paragraph 40 of Marshall relates to resource identification to uniquely distinguish one resource from other resources, the data specification of claim 1 "describes a resource required by the binding expression." Thus, the Appellants respectfully submit that Marshall does not teach or suggest a data specification describes a resource required by the binding expression, as recited in claim 1.

Claim 1 further recites, "a data resolution service configured to discover network resources that satisfy the data specification." The Examiner argues that this claim element can be found in Marshall. FOA, pp. 2. In support of the Examiner's position, the Office Action cites paragraphs 18, 22, and 57 of Marshall.

Paragraph 18 of Marshall, repeated above, mentions that an algorithm may be used to select from among several available interchangeable instances of a particular resource. However, this paragraph does not discuss a process of discovering network resources that satisfy a data specification. Thus, the Appellants respectfully submit that paragraph 18 of Marshall does not provide a requisite teaching to anticipate the above-quoted element of claim 1.

Paragraph 22 discusses various resource identifiers, but does not teach or suggest a data resolution service configured to discover network resources that satisfy the data specification. Paragraph 22 of Marshall states:

> In particular, without a system to centrally manage resource
> identifiers created by different service providers, third
> parties, and other entities, a service provider may be
> required to invest large amounts of effort and finances to
> manually manage resource identifiers. The dynamic binding of
> resources via resource ID, version ID and other identifiers
> may enable resources to be upgraded in the network without

effecting the entities which use the resources. This dynamic
binding, combined with the resource resolution mechanism,
may allow new instances of a particular type of resource to
be dynamically added to a network, without requiring
modifications or re-configuration in the services which use
the resources. Therefore, downtime which would otherwise
occur with upgrades and/or modifications to resources in a
network may be reduced or eliminated. Marshall, para. 22.

Similarly, paragraph 57 of Marshall discusses benefits of
employing a resource ID and version ID to retrieve the requested
resource, but fails to teach or suggest a data resolution service
configured to discover network resources that satisfy the data
specification.

In response, the Examiner states, "Applicant's argument that
Marshall 'does not teach or suggest a data resolution service
configured to discover network resources that satisfy the data
specification' completely overlooks the manner in which Marshall
provides a resource to a requesting entity. A resource
specification is provided that is used to retrieve a resource
mechanism, which in turn locates a resource that meets the
specific requirements (paragraph 0057)." FOA, pp. 8.

The Appellants respectfully submit that paragraph 57 of
Marshall specifically states, "According to another example of the
present invention, a resource type ID may be used to retrieve a
resource resolution mechanism." Marshall, para. 57 (emphasis
added). It is clear that the resource ID of Marshall is one-to-
one mapping to the resource itself. "Connections to remote nodes
may be retrieved by mapping the resource ID to the IP address and
port to be accessed, opening a TCP/IP connection to it, and
returning the protocol handler as a proxy for the remote node."
Marshall, para. 57. Thus, Marshall lacks any notion of a
discovery process to discover network resources that satisfy the
data specification.

Claim 1 also recites, "means for rebinding the binding
expression to the new network resource when the data specification
changes." The Examiner argues that this claim element can be

found in Marshall. In support of the Examiner's position, the
Office Action cites paragraphs 22, 37 and 46 of Marshall. FOA,
pp. 2.

The Appellants respectfully submit that paragraph 22 of
Marshall, repeated above, does not mention or suggest rebinding a
binding expression to a new network resource when a data
specification changes.

Paragraph 37 of Marshall states:

Resource management may be used to define, track, verify,
resolve and manage resources both statically and
dynamically. Other operations may also be performed. Static
resource management may encompass the management of
resources which takes place up to and including deployment
to the network. An example of static resource management may
involve managing whether or not a particular resource exists
within a particular context. Dynamic resource management may
encompass the management of resources which may take place
after deployment to the network. Resource management may
further involve providing a consistent management strategy
across different types of resources. Marshall, ¶ 37.

It is noted that operations of the resource management
described in paragraph 37 of Marshall do not include rebinding a
binding expression to a new network resource when a data
specification changes.

Paragraph 46 of Marshall states:

FIG. 2 illustrates an example of a resource management
system, according to an embodiment of the present invention.
The resource manager of the present invention may serve to
tie together various aspects of static resource management
and dynamic resource management. For example, static
resource management may involve allocation, deployment, etc.
while dynamic resource management may involve event/state
correlation. When a new resource is defined, the resource's
relationship to other resources may be defined in terms of
predefined rules, definitions or other criteria. Thus,
varying relationships among and between resources may be
established, thereby creating a network of resource
dependency definitions and/or rules. Marshall, para. 46.

Similarly, the Appellants respectfully submit that the
resource management system described in paragraph 46 of Marshall

does not teach or suggest rebinding a binding expression to a new network resource when a data specification changes.

For at least these reasons, the Appellants respectfully assert that the Examiner has not established a *prima facie* case of anticipation for claim 1. The Appellants submit that the rejection of claim 1 is improper and respectfully request that the rejection of claim 1 be reversed by the honorable Board.

Claims 2-5

If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Claims 2-5 are dependent on and further limit claim 1. Since the rejection of claim 1 is believed improper, the rejections of claims 2-5 are also believed improper for at least the same reasons as claim 1.

Claim 6

Claim 6 appears to be rejected for substantially the same reasoning as claim 1. FOA, pp. 3.

Unlike claim 1, claim 6 recites, "means for rebinding the binding expression to the new network resource when the resource descriptor changes." The Examiner fails to provide any evidence in the record that Marshall teaches or suggest this claim element. Moreover, the Appellants respectfully submit that Marshall does not mention or suggest rebinding a binding expression to a new network resource when a resource descriptor changes.

For at least this reason, and the reasons given for claim 1, the Appellants respectfully assert that the Examiner has not established a *prima facie* case of anticipation for claim 6. The Appellants submit that the rejection of claim 6 is improper and respectfully request that the rejection of claim 6 be reversed by the honorable Board.

Claims 7 and 8

Claims 7 and 8 are dependent on and further limit claim 6. Since the rejection of claim 6 is believed improper, the rejections of claims 7 and 8 are also believed improper for at least the same reasons as claim 6.

Claim 9

Claim 9 recites, in part, "A method for rebinding a binding expression to an appropriate network resource in a network, the binding expression being associated with a data specification describing the data required at the binding expression." In rejecting claim 9, the Examiner argues that Marshall teaches a method for rebinding a binding expression to an appropriate network resource in a network, the binding expression being associated with a data specification describing the data required at the binding expression. FOA, pp. 4. The Appellants respectfully disagree with the Examiner's interpretation of Marshall.

The Office Action offers paragraphs 18 and 40 of Marshall as evidence that Marshall anticipates the above-cited limitations of claim 9. FOA, pp. 3. As discussed in detail for claim 1, paragraph 18 of Marshall lacks teaching or suggestion of a binding expression, much less rebinding the binding expression to an appropriate network resource in a network. In addition, the Appellants find no teaching or suggestion in paragraph 40 of rebinding the binding expression to a new network resource (please see claim 1 discussion above for more detail).

Claim 9 further recites, "obtaining a list indicating potential appropriate network resources." The Examiner argues that this claim element can be found in Marshall. In support of the Examiner's position, the Office Action cites paragraphs 18, 22, and 57 of Marshall. FOA, pp. 4.

Paragraph 18 of Marshall, repeated above, mentions that an algorithm may be used to select from among several available

interchangeable instances of a particular resource. However, this paragraph does not discuss a process of obtaining a list indicating potential appropriate network resources. Thus, the Appellants respectfully submit that paragraph 18 of Marshall does not provide a requisite teaching to anticipate the above-quoted element of claim 9.

Paragraph 22 of Marshall discusses various resource identifiers, but does not teach or suggest obtaining a list indicating potential appropriate network resources. Similarly, paragraph 57 of Marshall discusses benefits of employing a resource ID and version ID to retrieve the requested resource, but fails to teach or suggest obtaining a list indicating potential appropriate network resources.

Thus, as discussed in detail for claim 1, the Appellants respectfully submit that paragraphs 18, 22 and 57 of Marshall does not provide a requisite teaching to anticipate the above-quoted element of claim 9.

Claim 9 also recites, "rebinding the binding expression to the appropriate network resource." The Examiner argues that this claim element can be found in Marshall. In support of the Examiner's position, the Office Action cites paragraphs 22, 37 and 46 of Marshall. FOA, pp. 4.

As discussed in detail for claim 1, the Appellants respectfully submit that paragraph 22 of Marshall, repeated above, discusses various resource identifiers but does not mention or suggest rebinding a binding expression to an appropriate network resource. Operations of the resource management described in paragraph 37 of Marshall do not include rebinding a binding expression to an appropriate network resource. Similarly, the Appellants respectfully submit that the resource management system described in paragraph 46 of Marshall does not teach or suggest rebinding a binding expression to an appropriate network resource.

For at least these reasons, the Appellants respectfully assert that the Examiner has not established a *prima facie* case of

anticipation for claim 9. The Appellants submit that the rejection of claim 9 is improper and respectfully request that the rejection of claim 9 be reversed by the honorable Board.

Claims 10-17

Claims 10-17 are dependent on and further limit claim 9. Since the rejection of claim 9 is believed improper, the rejections of claims 10-17 are also believed improper for at least the same reasons as claim 9.

Claim 18

Claim 18 recites, in part, "A system for rebinding a binding expression to an appropriate network resource in a network, the binding expression being associated with a data specification describing the data required at the binding expression." In rejecting claim 18, the Examiner argues that Marshall teaches a method for rebinding a binding expression to an appropriate network resource in a network, the binding expression being associated with a data specification describing the data required at the binding expression. FOA, pp. 5. The Appellants respectfully disagree with the Examiner's interpretation of Marshall.

The Office Action offers paragraphs 18 and 40 of Marshall as evidence that Marshall teaches a system for rebinding a binding expression to an appropriate network resource in a network, the binding expression being associated with a data specification describing the data required at the binding expression. FOA, pp. 5. The Appellants respectfully submit that paragraph 18 of Marshall lacks teaching or suggestion of a binding expression, much less rebinding the binding expression to an appropriate network resource in a network. In addition, the Appellants find no teaching or suggestion in paragraph 40 of rebinding the binding expression to a new network resource (please see claim 1 discussion above for more detail).

Claim 18 further recites, "a data resolution service configured to provide a list indicating potential appropriate network resources." The Examiner argues that this claim element can be found in Marshall. In support of the Examiner's position, the Office Action cites paragraphs 18, 22, and 57 of Marshall. FOA, pp. 6.

Paragraph 18 of Marshall, repeated above, mentions that an algorithm may be used to select from among several available interchangeable instances of a particular resource. However, this paragraph does not discuss a data resolution service configured to provide a list indicating potential appropriate network resources. Thus, the Appellants respectfully submit that paragraph 18 of Marshall does not provide a requisite teaching to anticipate the above-quoted element of claim 18.

Paragraph 22 of Marshall discusses various resource identifiers, but does not teach or suggest a data resolution service configured to provide a list indicating potential appropriate network resources. Similarly, paragraph 57 of Marshall discusses benefits of employing a resource ID and version ID to retrieve the requested resource, but fails to teach or suggest a data resolution service configured to provide a list indicating potential appropriate network resources.

Thus, the Appellants respectfully submit that paragraphs 18, 22 and 57 of Marshall do not provide a requisite teaching to anticipate the above-quoted element of claim 18.

Claim 18 further recites, "a port manager configured to provide an access port to the appropriate network resource such that the binding expression rebinds to the appropriate network resource via the access port." Paragraphs 22, 37, 46 and 57 of Marshall were offered by the Office Action as teaching this claim element. FOA, pp. 6. The Appellants respectfully disagree with the Examiner's interpretation of Marshall.

As discussed in more detail for claim 1, the Appellants respectfully submit that paragraphs 22 and 57 of Marshall,

repeated above, do not mention or suggest rebinding a binding expression to an appropriate network resource. Operations of the resource management described in paragraph 37 of Marshall do not include rebinding a binding expression to an appropriate network resource. Similarly, the Appellants respectfully submit that the resource management system described in paragraph 46 of Marshall does not teach or suggest rebinding a binding expression to an appropriate network resource.

For at least these reasons, the Appellants respectfully assert that the Examiner has not established a *prima facie* case of anticipation for claim 18. The Appellants submit that the rejection of claim 18 is improper and respectfully request that the rejection of claim 18 be reversed by the honorable Board.

<u>Claims 19 and 20</u>

Claims 19 and 20 are dependent on and further limit claim 18. Since the rejection of claim 18 is believed improper, the rejections of claims 19 and 20 are also believed improper for at least the same reasons as claim 18.

<u>Claim 21</u>

Claim 21 appears to be rejected for substantially the same reasoning as claim 9. OA, pp. 9. The Appellants therefore respectfully refer the Board to the discussion of claim 9 for the reasons why claim 21 is believed improper. For at least these reasons, Appellants request that the rejection of claim 21 be reversed by the honorable Board.

<u>Claims 22-25</u>

Claims 22-25 are dependent on and further limit claim 21. Since the rejection of claim 21 is believed improper, the rejections of claims 22-25 are also believed improper for at least the same reasons as claim 21.

Conclusion

In view of the foregoing, Appellant submits that the rejections of claims 1-25 are improper and respectfully requests that the rejections of claims 1-25 be reversed by the Board.

Respectfully submitted,

Dated: July 30, 2007

Ido Tuchman, Reg. No. 45,924
Law Office of Ido Tuchman
82-70 Beverly Road
Kew Gardens, NY 11415
Telephone (718) 544-1110
Facsimile (866) 607-8538

Claims Appendix

1. (original) A system for rebinding a binding expression to a new network resource, wherein a data specification describes a resource required by the binding expression, the system comprising:

a data resolution service configured to discover network resources that satisfy the data specification; and

means for rebinding the binding expression to the new network resource when the data specification changes.

2. (previously presented) The system of claim 1, wherein the data specification is computed at least partially from received data.

3. (original) The system of claim 1, wherein the means for rebinding receives announcements of changes in a currently bound network resource.

4. (original) The system of claim 3, wherein the data resolution service communicates the announcements to the means for rebinding.

5. (original) The system of claim 1, wherein the means for rebinding initiates rebinding according to programmer-specified criteria in response to the announcements.

6. (original) A system for rebinding a binding expression to a new network resource, wherein a data specification describes a resource required by the binding expression and a resource descriptor describes a currently bound network resource, the system comprising:

a data resolution service configured to discover network resources that satisfy the data specification; and

means for rebinding the binding expression to the new network resource when the resource descriptor changes.

7. (original) The system of claim 6, wherein the means for rebinding receives announcements of changes in the currently bound network resource from the data resolution service.

8. (original) The system of claim 7, wherein the means for rebinding initiates rebinding according to programmer-specified criteria in response to the announcements.

9. (original) A method for rebinding a binding expression to an appropriate network resource in a network, the binding expression being

associated with a data specification describing the data required at the binding expression, the network including a current network resource, and the network resources including at least one resource property, the method comprising:

obtaining a list indicating potential appropriate network resources;

selecting an appropriate network resource from the list; and

rebinding the binding expression to the appropriate network resource.

10. (original) The method of claim 9, further comprising receiving an announcement of a change in the current network resource.

11. (original) The method of claim 10, further comprising requesting the list upon receipt of the announcement.

12. (original) The method of claim 9, further comprising determining whether the current network resource is no longer appropriate.

13. (original) The method of claim 9, further comprising evaluating the data specification upon a request for a current value of the binding expression.

14. (original) The method of claim 9, further comprising requesting the list upon a change in the value of the data specification.

15. (original) The method of claim 9, further comprising obtaining an access port for the appropriate network resource.

16. (original) The method of claim 9, further comprising if an error occurs, rebinding the binding expression to an error source.

17. (original) The method of claim 9, wherein selecting the appropriate network resource further comprises determining the appropriate network resource according to programmer-specified criteria.

18. (original) A system for rebinding a binding expression to an appropriate network resource in a network, the binding expression being associated with a data specification describing the data required at

the binding expression, the network including a current network
5   resource, and the network resources including at least one resource
property, the system comprising:

a data resolution service configured to provide a list indicating
potential appropriate network resources; and

a port manager configured to provide an access port to the
10   appropriate network resource such that the binding expression rebinds
to the appropriate network resource via the access port.

19. (original) The system of claim 18, further comprising a
binding module configured to select the appropriate network resource
from the list indicating potential appropriate network resources.

20. (original) The system of claim 19, wherein the data
resolution service sends an announcement to the binding module when a
change in the resource property of the current network resource occurs.

21. (original) A computer program product embodied in a tangible
media comprising:

computer readable program codes coupled to the tangible media for
rebinding a binding expression to an appropriate network resource in a
5   network, the binding expression being associated with a data
specification describing the data required at the binding expression,
the network including a current network resource, and the network
resources including at least one resource property, the computer
readable program codes comprising:

10   first computer readable program code configured to cause the
program to provide a list indicating potential appropriate network
resources;

second computer readable program code configured to cause the
program to select an appropriate network resource from the list; and

15   third computer readable program code configured to cause the
program to rebind the binding expression to the appropriate network
resource.

22. (original) The computer program product of claim 21, wherein
the tangible media comprises a magnetic disk.

23. (original) The computer program product of claim 21, wherein

the tangible media comprises an optical disk.

24. (original) The computer program product of claim 21, wherein the tangible media comprises a propagating signal.

25. (original) The computer program product of claim 21, wherein the tangible media comprises a random access memory device..

Evidence Appendix

None.

Related Proceedings Appendix

None.